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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,975	09/06/2001	Roland Burkle	WEI0025	4324

7590

04/02/2004

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EXAMINER

SIMONE, CATHERINE A

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/869,975

Applicant(s)

BURKLE ET AL.

Examiner

Catherine Simone

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 14-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 25-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/03/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Withdrawn Rejections

1. The 35 U.S.C. 103 rejection of claims 1-13 and 25-62 over Takagi et al. in view of Verlinden et al. of record in the Office Action mailed 8/29/03, Pages 2-5, Paragraph #5 has been withdrawn due to the Applicants amendment filed 1/20/04.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-12, 25-35, 37-52, 54-59, 61 and 62** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bosma et al. (5,576,077).

Regarding **claims 1, 37 and 61**, Bosma et al. discloses a glass/plastic composite film for use in electronic components and devices such as displays, the composite film comprising a glass film having opposed side surfaces and a thickness of between 10 μm and 500 μm (see col. 1, lines 40-41) and a non-self supporting polymer coating applied on at least one of the side surfaces of the glass film with a thickness of between 1 μm and 200 μm (see col. 1, lines 18-21 and col. 3, lines 37-42), with the polymer coating being directly applied to the at least one of the side surfaces. However, Bosma et al. fails to disclose the at least one side of the composite film having an optical retardation that is not more than 20 nm. Bosma et al., however, does teach the

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value of optical retardation and its equation and how it may be adjusted by choosing a proper value of the thickness of the layer (see col. 2, lines 32-34). Therefore, the optimum range for the optical retardation would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end results as shown by Bosma et al. Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the composite film in Bosma et al. with an optical retardation that is not more than 20 nm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. MPEP 2144.05 (II).

Regarding **claims 5 and 41**, note the glass thickness is 10 to 400 μm (see col. 1, line 44). Regarding **claims 6 and 42**, note the thickness of the polymer coating is 2 to 100 μm (see col. 1, lines 18-21). Regarding **claims 11 and 49**, note the composite film is temperature stable up to 130°C, and up to 140°C in the case of short-term heating (see col. 4, line 2). Regarding **claims 12 and 52**, note the polymer coating consists of polyimide (see col. 2, line 67). Regarding **claim 25**, note the application of the glass/plastic composite film is in a liquid crystal display (see col. 2, lines 52-55). Regarding **claims 26, 54 and 62**, note the thickness of the polymer coating is between 1 μm and 100 μm (see col. 1, lines 18-21). Regarding **claims 27 and 55**, note the glass film thickness is between 10 μm to 200 μm (see col. 1, line 44). Regarding **claims 28 and 56**, note the glass film thickness is between 10 μm to 100 μm (see col. 1, line 44). Regarding **claims 29 and 57**, note the thickness of the polymer coating is between 2 μm and 50 μm (see col. 1, lines 18-21). Regarding **claims 34 and 50**, note the composite film is temperature stable up to 180°C in the case of short term heating (see col. 4, lines 1-3). Regarding **claims 35 and 51**, note

the composite film is temperature stable up to 200°C in the case of short term heating (see col. 4, lines 1-3).

Regarding **claims 9 and 45**, Bosma et al. fails to disclose the transmission of the glass/composite film is more than 90% of the transmission of the glass film when the glass film is uncoated and the haziness caused by the polymer layer increases the haziness of the composite film by less than 1% in comparison to the glass film when the glass film is uncoated. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the transmission of the glass/composite film in Bosma et al. be more than 90% of the transmission of the glass film when the glass film is uncoated and the haziness caused by the polymer layer to increase the haziness of the composite film by less than 1% in comparison to the glass film when the glass film is uncoated, since it has been held that mere recognition of latent properties in the prior art does not render nonobvious an otherwise known invention. MPEP 2145 (II).

Regarding **claims 2-4, 8, 10, 30-33, 38-40, 46-48, 58 and 59**, Bosma et al. fails to teach specific ranges for a waviness and roughness of the surface of the composite film and specific ranges for a modulus of elasticity of the polymer layer as recited in claims 2-4, 8, 10, 30-33, 38-40, 46-48, 58 and 59. The optimum ranges for the waviness, roughness and modulus of elasticity would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end results. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the composite film in Bosma et al. with the specific ranges for roughness, waviness and modulus of elasticity as recited in claims 2-4, 8, 10, 30-33, 38-40, 46-48, 58 and 59, since it has been held that where the general

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conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. MPEP 2144.05 (II).

Regarding **claims 7 and 43**, Bosma et al. fails to disclose the polymer layer covering at least one edge of the glass film. Normally, it is to be expected that a change in shape of the polymer layer would be an unpatentable modification. Under some circumstances, however, changes such as shape may impart patentability to a product if the particular shape claimed produces a new and unexpected result which is different in kind and not merely in degree from the results of the prior art. *In re Dailey et al*, 149 USPQ 47 CCPA 1966. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to change the shape or form of the polymer layer in Bosma et al. so as to cover at least one edge of the glass film. One skilled in the art would have been motivated to do so in order to form a glass/plastic composite film, since it has been held that the change in form or shape of the polymer layer would be an unpatentable modification in absence of showing unexpected results.

4. **Claims 13, 36, 53 and 60** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bosma et al. (5,576,077) in view of Dumbaugh, Jr. (4,824,808).

Bosma et al. discloses a glass/plastic composite film for use in electronic components and devices such as displays, the composite film comprising a glass film having opposed side surfaces and a thickness of between 10 μm and 500 μm (see col. 1, lines 40-41) and a non-self supporting polymer coating applied on at least one of the side surfaces of the glass film with a thickness of between 1 μm and 200 μm (see col. 1, lines 18-21 and col. 3, lines 37-42), with the polymer coating being directly applied to the at least one of the side surfaces. However, Bosma

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et al. fails to teach the glass film consisting of alkali free borosilicate glass. Dumbaugh, Jr. teaches that it is old and well-known in the art to have alkali free borosilicate glass (see col. 4, line 45) for the purpose of producing a glass substrate to be used for LCD display applications.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have the glass substrate in Bosma et al. consist of alkali free borosilicate glass as suggested by Dumbaugh, Jr. in order to produce a glass substrate to be used for LCD display applications.

Response to Arguments

5. Applicant's arguments with respect to claims 1-13 and 25-62 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,


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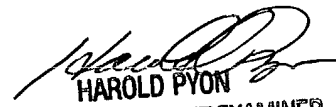
however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (571)272-1501. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Catherine Simone
Examiner
Art Unit 1772
March 26, 2004


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

3/29/04